



2016 CALIFORNIA BUILDING STANDARDS CODE OF REGULATIONS TITLE 24

PV Submittal Checklist - System Summary Sheet

PROPERTY ADDRESS/APN # \_\_\_\_\_

(Please mark all that apply) Manufactured Home (If roof mounted, permit will be through HCD)
Main Residence Second Residence Garage/Storage Barn Other \_\_\_\_\_

Required - Signed contract with the property owner for the solar installation

For all systems provide Roof Mount two sets or Ground Mount three sets of:

Electrical schematic diagram of system [module wiring (series/parallel), disconnects, grounding/bonding, wire, conduit type, size, and number of conductors in each section of conduit], rapid shutdown, D/C color coding. When batteries are to be installed include them in the diagram and their locations/rooms and venting.

Site diagram (show arrangement of panels on the roof or ground, location of combiner box, inverter, utility disconnect, main service, show approximate. distance from panel to all components, dimension all setbacks to all structures and property lines).

Equipment cut sheets including inverters, modules, wind generators, etc.

Labeling schedule for equipment and electrical hazard per CEC sec. 690.31 and 690.56

System KW \_\_\_\_\_

Completed page two, the System Summary sheet.

For Roof Mounted Systems Provide:

Photovoltaic systems shall be Class A listed and labeled for fire classification per UL 1703. Provide documentation demonstrating compliance.

Identify location and method of rapid shutdown per CEC sec. 690.12

Solar panels that cover more than 50% of the total roof area, require fire department approval.

Engineered or listed system for mounting and attachment of system.

Integrated systems that replace roofing material require detailed information showing class "A" roof assembly.

For Ground Mount and Wind Generator Systems Provide:

Engineering [When the total height from ground to top of the array (not post height) exceeds 7 feet] for mounting, attachments, and foundation to meet the minimum wind and snow loads. Provide details of attachments, anchors, brackets, photovoltaic panels, and all hardware.

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<b>System Summary:</b>	Roof Mount	Ground Mount	Batteries
	Off-Grid	Grid Tie	Generator

### Inverter(s):

Number of Inverter(s) Manufacturer/Model Number \_\_\_\_\_

DC Input Voltage Range \_\_\_\_\_ Listed for Utility Interconnection (Y, N)

### From the module listing:

\*Maximum system voltage \_\_\_\_\_ Open-circuit voltage (**VOC**) \_\_\_\_\_

Short-circuit current (**ICS**) \_\_\_\_\_ Voltage at Pmax \_\_\_\_\_

Maximum series fuse rating \_\_\_\_\_ Current at Pmax \_\_\_\_\_

**\*Calculated system voltage = (VOC x #of modules in series x 1.13) CEC 690.7**

Calculated system voltage must be less than or equal to the module \*Maximum system Voltage.

### Array information:

Total number of modules \_\_\_\_\_ Number of modules in each series \_\_\_\_\_

Number of optimizer/Micro-Inverters \_\_\_\_\_ Number of parallel source circuits \_\_\_\_\_

Provide and identify Arc Fault protection per CEC sec. 690.11

**Operating voltage** \_\_\_\_\_ volts (Voltage at Pmax x number of modules in series)

**Operating current** \_\_\_\_\_ amps (Current at Pmax x number of strings in parallel)

**Minimum PV source circuit ampacity for conductor sizing** \_\_\_\_\_

(**ICS** x number of parallel circuits x 1.25 x 1.25) CEC 690.8A-1, 690.8B-1 and NOTE 2.

Explanation: To determine wire sizing and over current protection you must determine the minimum source circuit conductor ampacity which is 125% of the maximum PV source circuit current ampacity (CEC 690.8.A-1). The maximum PV source circuit current ampacity is 125% of the source circuit ampacity or **ICS** (CEC 690.8B-1).

NOTE 1: All wiring rated at 90 degrees and equipment on array side of the inverter must be DC rated.

NOTE 2: Further ampacity adjustments are necessary when more than 3 current carrying conductors are installed in the conduit. See CEC Table 310.15(B)(2)(a)

NOTE 3: PER CEC 705.12 Exception: For dwelling unit, the sum of the ampere ratings of the over current devices shall not exceed 120 percent of the bus bar or conductor.

**I understand an application missing any items will be deemed incomplete and the plan check will not be scheduled until all the items marked are received by the Building Division. This may affect applicable fees and codes since the operative date of application will be the date on which a complete application is received. All the items required on this checklist are present and complete.**

**Signature** \_\_\_\_\_ **Date** \_\_\_\_\_